

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing Of Claims:

- 1.-12. (Canceled)
13. (New) A sensor element, comprising:
a solid electrolyte;
at least one electrochemical measuring cell including a first electrode and a second electrode that are electrically connected by the solid electrolyte;
a first element including a catalytically active material and a second diffusion-limiting element;
a gas chamber communicating with a measuring gas located outside of the sensor element via the first element and in which the second electrode is situated, wherein the first element has a length of at least 1 mm in a diffusion direction of the measuring gas.
14. (New) The sensor element as recited in Claim 13, wherein:
the sensor element is for detecting a physical property of a measuring gas.
15. (New) The sensor element as recited in Claim 13, wherein:
the sensor element is for determining an oxygen partial pressure in an exhaust gas of an internal combustion engine.
16. (New) The sensor element as recited in Claim 13, wherein at least one of the first element and the second diffusion-limiting element includes at least regionally a porous design.
17. (New) The sensor element as recited in Claim 13, wherein the first element has a length in the range from 1.5 mm to 20 mm in the diffusion direction of the measuring gas.
18. (New) The sensor element as recited in Claim 13, wherein the first element has a length in the range of 2 mm to 5 mm.
19. (New) The sensor element as recited in Claim 16, wherein a proportion of pores in the first element is at least twice as large as a proportion of pores in the second diffusion-limiting element.

20. (New) The sensor element as recited in Claim 13, wherein a volume of the first element filled with a porous material is in the range from 1 mm³ to 20 mm³.
21. (New) The sensor element as recited in Claim 13, wherein a volume of the first element filled with a porous material is in the range from 2 mm³ to 10 mm³.
22. (New) The sensor element as recited in Claim 13, wherein a diffusion cross section of the first element is at least twice as large as a diffusion cross section of the second diffusion-limiting element.
23. (New) The sensor element as recited in Claim 13, wherein at least one of:
 - the first element includes a channel filled with a porous material,
 - a height of the first element is in a range from 0.1 mm to 0.5 mm, and
 - a width of the first element is in the range from 1 mm to 4 mm.
24. (New) The sensor element as recited in Claim 13, wherein at least one of:
 - the first element includes a channel filled with a porous material,
 - a height of the first element is 0.3 mm, and
 - a width of the first element is 3 mm.
25. (New) The sensor element as recited in Claim 13, wherein the second diffusion-limiting element is situated between the first element and the gas chamber.
26. (New) The sensor element as recited in Claim 13, further comprising:
 - a constriction having a diffusion cross section that is smaller than a diffusion cross section of the first element, the constriction being is provided on a side of the first element facing toward the measuring gas.
27. (New) The sensor element as recited in Claim 26, wherein at least one of:
 - the diffusion cross section of the constriction is 10% to 80% of the diffusion cross section of the first element, and
 - a length of the constriction in the diffusion direction is 10% to 100% of the length of the first element.

28. (New) The sensor element as recited in Claim 26, wherein at least one of:
the diffusion cross section of the constriction is 20% to 40% of the
diffusion cross section of the first element, and
a length of the constriction in the diffusion direction is 10% to 100% of
the length of the first element.
29. (New) The sensor element as recited in Claim 27, further comprising:
a porous material provided in an area of the constriction, a mean pore diameter of
which is in the range from 5% to 20% of a largest cross section of the constriction.
30. (New) The sensor element as recited in Claim 13, wherein at least one of the first element
and the second diffusion-limiting element is at least regionally provided in a layer plane
of the measuring gas chamber.